NEW YORK STATE MECHANIC.

Under the Direction of the New York State Mechanic Association.

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KNOWLEDGE FOR THE PEOPLE.

WORKING METALS.

Why are the ancient Britons concluded to have been expert in working metals?

Because the art of working in iron and steel had risen to such perfection in the tenth century, that even the horses of some of the chief knights and barons were covered with steel and iron armour. Artificers who wrought in iron were so highly regarded in that warlike time, that every military officer had his smith, who constantly attended his person to keep his arms and armour in order. The chief smith was an officer of considerable dignity in the court of the Anglo-Saxon and Welsh kings, where he enjoyed many privileges, and his wages were much higher than those of any other artificer. In the Welsh court, the king's smith was next in rank to the domestic chaplain, and was entitled to a draught of every kind of liquor that was brought into the hall.

Why were bellows first invented?

Because they might imitate the action of the lungs and a hollow reed placed in the mouth of the blower, the latter being the first instrument employed for blowing a fire. Our common bellows appear to have been known to the ancient Greeks, and Roman lamps have been found in the form of bellows.

Why is it to be regretted that we know but little of the antient construction of bellows?

Because more information on this subject would enlarge the knowledge we possess of the metallurgy of the ancients.

Strabo tells us, on the authority of an old historian, that Anacharsis the Scythian philosopher, invented the bellows, the anchor, and the potter's wheel; but this seems doubtful, as Pliny, Seneca, Diogenes, Laertius, and Suidas, only attribute the two last to him; and Strabo also remarks, that the potter's wheel is mentioned by Homer, who lived prior to the time of Anacharsis. It is, therefore, probable that the latter became acquainted with the invention on his travels, and having made it known to his countrymen, was looked upon as the inventor.

Why are forge-bellows constructed with three boards?

Because they are required to keep up a constant and unremitting stream of air through the fuel, to keep it in vivid combustion. Thus, the centre board is fixed, and furnished with a valve opening upwards, the lower board being movable with a valve also opening upwards, and the upper board being under a continual pressure by weights acting upon it. When the lower board is let down, so that the chamber between it and the middle board is enlarged, the air included between these boards being rarefied, the external pressure in the atmosphere will open the valve in the lower board, and the chamber between the lower and the middle boards will be filled with air in its common state. The lower board is now raised by the power which works the bellows, and the air between it and the middle board is condensed. It cannot escape through the lower valve, because it opens upwards. It acts therefore, with a pressure proportional to the working power on the valve in the middle board, and it forces open the valve, which opens upwards. The air is thus driven from beneath the lower and middle boards into the chamber between the middle and upper boards. It cannot return from this chamber, because the valve in the middle board opens upwards. The upper board being loaded with weights, it will be condensed while included in this chamber, and will issue from the nozzle with a force proportionate to the weights. While the air is thus rushing from the nozzle, the lower board is let down and again drawn up, and a fresh supply of air is brought into the chamber between the upper and middle board. This air is introduced between the middle and upper board before the former supply has been exhausted, and by working the bellows, with sufficient speed, a large quantity of air will be collected in the upper chamber, so that the weights on the upper board will force a continual stream of air through the nozzle.—*Lardner.*

There are usually two blast-holes to conduct the stream of air from the bellows to the laboratory of the furnace, placed on opposite sides, but so angled that the streams do not impinge on each other. The bellows are commonly cyllindrical, and their pistons are worked by a steam-engine.

Why are these bellows superior to the house-bellows?

Because the latter are constructed only with two boards, and have thus only an intermitting action, or blow by fits, the action being suspended while the upper board is being raised.

Why are German bellows made of wood superior to those in common use?

Because the effect produced by them is stronger and more uniform, and they last longer. Some idea may be formed of this contrivance from the following sketch. The entire machine is composed of two boxes placed over each other, the uppermost of which can be moved up and down, in the manner of a lid with a hinge; but the sides of the upper box are sufficiently large to contain the lower between them, when raised to its greatest extent. Both are fastened together at the smallest extremity, where the pipe is inserted by a strong iron bolt. Thus, when the boxes fit each other with exactness, and the upper is raised over the under, which is immovable, the space contained within both will be increased: consequently, more air will rush in through the valve in the bottom of the lower one; and when the upper box is again pressed down, this air will be expelled forcibly through the pipe. The only difficulty is to prevent any portion of the air from escaping at any other part of the machine than the orifice of the pipe; and this is obviated by the simple contrivance of placing movable slips of wood at the inner sides of the uppermost box, which, by means of metal springs are pressed to the sides of the lower box, and fill up the intervening space.—*Beckmann.*

IRON.

Why is the use of iron believed to have been known in the earliest ages?

Because of its frequent mention in the Bible: thus, Tubal Cain, who lived nearly 4,000 years before the commencement of the Christian era, was "an instructer of every artificer in brass and iron." (Gen. iv. 22.) and we read that Abraham took a knife to slay his son Isaac. (Gen. xxii. 10.) In these early times too, mention is made of shears and of shearing of sheep. (Gen. xxxviii. 12, 13.)

Why is this knowledge supposed to have been afterwards lost?

Because many of the ancient nations used stones, flints, the horns and bones of various animals, the bones and shells of fish, reeds and thorns, for every purpose in which the moderns now use edge tools of iron and steel.

Chronology informs us, iron was first discovered by the burning of Mount Ida, 1406 B. C. In England by the Romans, soon after the landing of Cæsar; first discovered in America, in Virginia, 1715: first cast in England, at Blackstead, Sussex, 1544.

Why was iron, at one period forbidden to be used by the Romans, except in agriculture?

Because they thought iron poisonous, and that wounds made with iron instruments healed with difficulty. Chemistry has, however, exposed this fallacy. Fourcroy says iron is the only metal which is not noxious, and whose effects are not to be feared. Indeed, its effects on the animal economy are evidently beneficial.

Why is iron the most useful of metals?

Because it becomes softer by heat, and has the capability of being welded to another piece of iron, so as to form one entire mass: and this may be done without rivets, solder, or melting either of the pieces. No other metal possesses this singular property, except platinum.

An iron wire only one-tenth of an inch in diameter, will carry 450 pounds without breaking. A wire of tempered steel of the same size will carry nearly 900 pounds.—*Black.*

Why is the Swedish superior to British iron?

Because the Swedes smelt with wood instead of coke. It is imported into England in great quantities and is chiefly used for carbonization in steel.

Why is iron deprived of its malleability by long-continued hammering?

Because it loses a portion of its latent caloric; Dr. Black being of opinion that metals are malleable in proportion to the matter of heat which they contain in a latent state.

Why is cast-iron puddled and rolled?

Because a principal part of the foreign substances are thus burned away or squeezed out and malleability is conferred upon the metal by rendering it more pure.

By this curious process of *puddling*, cast-iron, after it has been to a certain extent *refined*, by refusion in a forge, is, in this country, converted into wrought iron. The cast-iron is put into a reverberatory furnace, and when in fusion, is stirred, so that every part may be exposed to the air and flames. After a time, the mass heaves, emits a blue flame, gradually grows tough, and becomes less fusible, and at length pulverulent; the fire is then urged, so that the particles again agglutinate at a welding heat, and are gradually wrought up into masses. In that state of intense heat, the masses are passed successively between rollers, and the bars made malleable. They are cut into pieces, placed in parcels in a very hot reverberatory, and again hammered or rolled out into bars. They are thus rendered more tough, flexible, and malleable, but much less fusible, and may be considered as nearly pure iron.

Why is iron better cast perpendicularly than horizontally?

Because of the pressure of the upright column, which renders the iron much less liable to air-bubbles and imperfections of that kind, which defeat the skill and calculations of the machinist. If this upright pressure be increased by a weight of extraneous metal, the casting is still more likely to be sound.

Why does a rod of wrought iron, if plunged into cast-iron in fusion, become steel?

Because the iron absorbs part of the carbon. What is called *case-hardning*, is a converstion of the *surface* of iron into steel.

Why is the process by which iron is converted into steel, cementation?

Because it consists in heating bars of the purest iron in contact with charcoal; it absorbs carbon, and increases in weight, at the same time acquiring a blistered surface. This, when drawn into smaller bars, and beaten, forms *tilted steel*; and this broken up, heated, welded, and again drawn out into bars, forms *shear steel.*

In this process it has been commonly considered that the carbon combines *mechanically* with the iron; our chemists have, however, long been of

opinion, that it is a *chemical* combination that takes place, by the gradual absorption of carbon in the gaseous state, by the iron. This fact has been proved by Mr. Charles Mackintosh, of Scotland, who has taken out a patent for preparing steel, by subjecting the iron to a stream of carburetted hydrogen gas, evolved from coal under distillation. This iron is enclosed in a pot or crucible in the furnace, and when arrived at the proper heat, a stream of gas is directed by a pipe into the crucible, which has another aperture to allow that part of the gas to escape, which has not been taken up by the metal. Steel, in ingots, is porous; but, to confer solidity, it is hammered, tilted, and rolled. By the power of a water-wheel, fifteen feet in diameter, hammers are worked, weighing from 3 to 4½ cwt. and strike, at ten or twelve inches fall, from 100 to 220 times in a minute. The ingots, at a strong read heat, are exposed to the action of these hammers, and the metals condensed into bars, which are next submitted, at the same degree of heat, to the tilting hammer, which gives 300 strokes per minute: lastly, they are rolled or flattened into sheets, and drawn into lengths. Six tons a week are hammered down by one hammer; about three tons are tilted; and twenty-four tons can be rolled, working night and day, by relays of hands.

The making of steel is a British manufacture scarcely sixty years old. Previously it came from Austria and Syria, and was dear and little used. It is however, now heated, welded, cut, and moulded in Great Britain, with nearly the same facility as deal wood by an ordinary carpenter.

Why does a drop of nitric acid, let fall upon steel, occasion a black spot?

Because the iron is dissolved, and the carbon thereby exposed to view.—*Parkes.*

Why is steel tempered?

Because, when steel is heated to a cherry-red colour, and then plunged into cold water, it becomes so extremely hard and brittle, as to be unfit for almost any practical purpose; and *tempering* reduces it from this extreme hardness, by heating it to a certain point or temperature.

The polishing of steel is not executed in the same manner as that of the softer metals; the steel is not polished until it has been hardened, and the harder it is, the more brilliant will be its polish. Rotten-stone, a kind of very light tripoli, but finer than the other sorts is used.

Why are the most minute instruments generally made with good steel?

Because it is much more ductile than iron: a finer wire being drawn from it than from any other metal.

THE NEW TARIFF.

Names of Articles.		*Duties by Act 1832.*	*House Bill Passed.*
Flannels and baises,	square yard,	16	14
Carpeting, Brussels, &c.	do.	63	55
do. Venetian, &c.	do.	35	30
do. floor cloth pat.	do.	43	35
Oilcloth furniture,	do.	12	10
Cotton bagging,	do.	3½	4
Vinegar,	gallon,	8½	8
Beer in casks,	do.	15 }	15
Beer in bottles,	do.	20 }	20
Oil, fish, &c.	do.	—	15
Oil, olive,	do.	25	20
Oil, castor,	do.	40	—
Oil, linseed,	do.	25	25
Oil, rapeseed,	do.	25	25
Sugar, brown and clayed,	pound,	2½	2½
Sugar, white clayed,	do.	3½	4
Sugar, loaf,	do.	12	6
Sugar, lump and other refined,	do.	10	6
Sugar, candy,	do.	12	4
Sugar, sirup,	do.	2½	5
Chocolate,	do.	4	4
Cheese,	do.	9	—
Tallow candles,	do.	5	4
Lard,	do.	3	3
Beef and pork,	do.	2	2
Bacon,	do.	3	3
Butter,	do.	5	5
Saltpetre, refined,	do.	3	2
Oil of vitriol,	do.	3	1
Dry ochre,	do.	1	1
Ochre in oil,	do.	1½	—
Red and white lead,	do.	5	4
Whiting,	do.	1	1½
Litharge,	do.	5	—
Sugar of lead,	do.	5	4
Lead, pig, &c.	do.	3	3
Lead, pipes,	do.	5	4
Lead, old scrap,	do.	2	1½
Cordage, tarred,	do.	4	5
Cordage, untarred,	do.	5	4½
Twine, pack thread, &c.	do.	5	6
Corks,	do.	12	30 p c
Copper rods and bolts,	do.	4	4
Copper nails and spikes,	do.	5	4
Wire, cap or bonnet,	do.	12	12
Do. iron and steel nov. adv. 14,	do.	4	5
Do. do. do. above No. 14,	do.	2	8 a 11
Iron nails,	do.	5	3
Iron spikes,	do.	4	2½
Do. cables, chains and parts,	do.	3	2½
Do. anchors,	do.	2	2½
Do. anvils,	do.	2	2½
Do. blacksmiths' ham'rs, &c.	do.	2½	2½
Do. castings, vessels, &c.	do.	1½	1½
Do. all other,	do.	1	1
Do. round and braziers' rods, 3-16 a 8-16 dia.	do.	3	2½
Do. nail or spike rods,	do.	3	2½
Do. sheep or hoop,	do.	3	2½
Do. band, &c.	do.	3	2½
Do. in pigs,	ton,	10 00	9 00
Do. old scrap,	cwt.	62½	50
Do. bar rolled,	ton,	30 00	25 00
Do. bar hammered,	do.	18 00	17 00
Hemp,	cwt.	2 00	2 00
Alum,	do.	2 50	1 50
Copperas,	do.	2 00	2 00
Wheat flour,	do.	50	70
Salt,	bushel,	10	8
Coal,	do.	6	1 75
Wheat,	do.	25	25
Oats,	do.	10	10
Potatoes,	do.	10	10
Paper, folio and qr. p'rt,	lb.	20	17
Do. foolscap, &c.	do.	17	15
Do. printing cop'pt, &c.	do.	10	10½
Do. sheathing, &c.	do.	3	3
Do. all other,	do.	15	15
Books prior to 1775,	vol.	4	4
Do. other than English,	do.	4	4
Do. Greek and Latin bound,	do.	15	15
Do. do. do. unbound,	do.	13	13
Do. all other bound,	do.	30	—
Do. all other unbound,	do.	26	—
Apth's vials under 6 oz.	gr.	1 75	1 70
Do. do. 6 to 16 oz.	do.	2 25	2 25
Demijohns,	No.	25	15 a 25
Glass bottles to 1 quart,	do.	2 00	3 00
Glass bottles over 1 quart,	do.	2 25	1 00
Playing cards,	pack,	30	25
Window glass not over 8 by 10, per 100,		3 00	2 50
Do. over 8 by 10 and not over 10 by 12, 100 square feet,		3 50	3 50
Do. over 10 by 12, 100 squ. ft.,		4 00	6 00
Fish, dried or smoked,	quintal,	1 00	1 00
Fish, salmon,	barrel,	2 00	2 00
Fish, mackerel,	do.	1 50	1 50
Fish, all other,	do.	1 00	1 00
Shoes and slippers, silk,	pair,	30	—
Shoes, prunella,	do.	25	25
Shoes, leather, &c.	do.	25	30
Shoes, children,	do.	15	15
Boots and bootees,	do.	1 50	1 20
Wool, over 8 cts.	pounds,	{ 40 per ct. and 4 cts.	30 p.c. and 3 cts.
Woollen yarn,		{ 50 pr. ct. and 4 cts.	30 p.c.
Merino shawls,	per ct.	50	40
Cloths and cassimeres,	do.	50	40
Other woollen manufactures,	do.	50	30
Clothes, ready made,	do.	50	50
Glass, cut,	pound,	{ 30 per ct. and 3 cts.	25 a 42
Glass, plain and other,	do.	{ 20 per ct. and 2 cts.	10
Silk goods—pongees and plain white	do.	per lb.	1 50
all other,	do.		2 50
Watches and diamonds,			7½
Gems, pearls, &c.			7
Molasses, 4½ mills per lb. instead 5 cents per gallon.			
Wines—Madeira, Sherry, San Lucar, Canary, pr. gal.,			60
Champagne,			40
Port, Burgundy, and Claret in bottles,			35
Do. in casks,			15
Teneriffe and Claret in casks,			6
White, not enumerated, of France, Austria, Prussia, Sardinia, and Portugal, in casks,			7½
Do. in bottles,			20
Red, of do. in casks,			6
Do. do. in bottles,			20
White and red of Spain, Germany, and the Mediterranean, not enumerated, in casks,			12½
Do. do. in bottles,			20
Wines of Sicily—Madeira and Marsala,			25
Other wines of Sicily,			15
All other wines and other than those of France, Austria, Prussia, Sardinia and Portugal, in bottles,			65
Do. in casks,			25

These duties are imposed by the first nine sections of the law. The following list comprises all the important articles, to be admitted free of duty:

1. All articles imported for the use of the U. States.

2. All goods, the product of the United States, exported and brought back, and books and personal and household effects of citizens of the U. States dying abroad.

3. Paintings and statuary, the production of American artists residing abroad.

4. Wearing apparel in actual use, and other personal effects, and tools of trade, of persons arriving in the United States.

5. Philosophical apparatus, instruments, books, maps, and charts, statues, statuary, busts and casts, paintings, drawings, engravings, etchings, specimens of sculpture, cabinets of coins, medals, gems and all other collections of antiquities, provided the same be specially imported in good faith for the use (and by the order) of any society incorporated or established for philosophical or literary purposes, or for the use and by the order of any college, academy, school, or seminary of learning in the U. States.

6. Anatomical preparations, models of machinery, and of other inventions and improvements in the arts; specimens in natural history, mineralogy, and botany; trees, shrubs, plants, bulbs or roots, and garden seeds, not otherwise specified; berries, nuts, and vegetables, used principally in dyeing or composing dyes; all dyewoods in stick; whale and other fish oils of American fisheries, and all other articles the produce of said fisheries; animals imported for breed; fish, fresh caught, imported for daily consumption; fruit, green or ripe, from the West Indies, in bulk; tea and coffee, when imported in American vessels from the places of their growth.

7. Adhesive felt for sheathing vessels, aloes, antimony crude, argil, asafœtida, ava root, barilla, bark of cork tree unmanufactured; bells of bell metal, and chimes of bells; brass in pigs or bars, and old brass; Brazil wood, crude brimstone and flour of sulphur, bullion, burr stones unwrought, cochineal, coins and gold and silver, copper imported in any shape for the use of the mint, copper, in pigs, or bars, and copper ore, old copper, cream of tartar, flints, ground flints, gold bullion, gold epaulettes, grindstones, gum Arabic, gum Senegal, gum tragacanth, india rubber, oakum, lac dye, leeches, madder, mother of pearl, nickel, nux vomica, palm leaf manufactured, palm oil, Peruvian bark, platina, ivory, plaster of Paris, rattans and reeds, saltpetre when crude, sarsaparilla, shellac, silver epaulettes and wings, stones, stones called rotten.

Section 10, enacts that on all unenumerated articles shall be imposed a duty of 20 per cent. ad valorem.

Section 11. An additional ten per cent. shall be levied on all goods which shall be imported in vessels not of the United States—when no specific discrimination is made by the bill: and 10 per cent. additional on all goods except those brought from beyond the Cape of Good Hope in foreign vessels—provided no treaty stipulations be infringed thereby.

Section 12. All duties shall be paid in cash—or the goods will be sold after 60 days detention.

Section 13, prescribes the method of selling, and means for the owner to recover the overplus.

Section 14 allows a drawback on foreign sugar refined in and exported from the U. States, equal in amount to the duty paid on the foreign sugar: of 5 cents per gallon on spirits distilled from molasses till 1843, when it shall be only 4, and annually reduced 1 cent.

Section 15 enacts that no drawback shall be allowed to goods entitled to debenture, unless exported within three years after their import.

Section 16 provides the mode of valuation of all goods paying *ad valorem* duties, enacting that all costs, charges and commissions, except insurance, shall be added to the market value.

Section 17 empowers collectors and appraisers to take testimony necessary for valuation.

Section 18 provides for cases of disagreement on appraisal.

Section 19 enacts penalties for attempts to evade the payment of duties.

Section 20 imposes on non-enumerated articles the same duties as those enumerated which they most resemble shall pay.

Section 21 directs the method of appraisal.

Section 22 provides for ports where there are no appraisers.

Section 23 directs the secretary of the treasury to make necessary rules for faithful appraisals.

Section 24 directs collectors to follow the secretary's instructions.

Section 25 provides that the act shall not apply to vessels that shall leave their last port east of the Capes Good Hope and Henlopen, Sept. 1, 1842.

Section 26 provides that the penalties of the law of June 30, 1842, shall be continued.

Section 27 (Land Distribution) omitted.

Section 28, 29, 30, (Struck out in Senate.)

Section 31 requires the secretary annually to ascertain and report what articles have paid a duty of more than 30 per cent. ad valorem.

Section 32 prohibits the importation of indecent prints and books.

Section 33 establishes a ton at 20 hundred weight—at 112 lbs. each.

A new section is added in the senate, enacting that while the distribution of the public lands is suspended the 10 per cent allowed to the western states shall also be suspended.

AWARD OF PREMIUMS.

From the report of the committee of the Agricultural Society appointed to examine the products of farms, gardens and shops, we have selected the following items noticed by them at the late fair in Albany. Our limits would not admit a publication of the whole.

The first object that came under the observation of your committee, was a beautiful specimen of *Window Glass*, manufactured by A. R. & S. H. Fox, Sandlake, with so few curls or waves in it, as to make it almost equal to crown glass. With such improvements in the art of making common glass, the community, by patronizing the establishment, need no longer be apprehensive, when they *want light*, of seeing through a glass *darkly*. Your committee award a diploma.

The next articles that fixed the attention of your committee, were some beautifully polished *Screw Augurs*, from the firm of PRUYN, WILSON & VOSBURGH, Albany, so superbly polished that the committee, on close *reflection*, came to the conclusion, that it would at least be a *bore* if they could not make their *way* in the world upon their own merits, without any other recommendation.

They were next invited to pass through a building erected especially for the display of mechanical objects. The *coup d'œil* at once presented a spectacle exceedingly gratifying to the eye of the observer. The first specimens that fell under their consideration, were those of *Saddlery and Harness*. The saddles were made of black leather, which the committee considered a desideratum, as they would not admit of stain; the material was new, of beautiful enamelled leather, remaining perfectly pliable, and without the stiffness of the japanned patent leather; the harness of the same material, combining some improvements in the make, adding strength as well as lightness. They award a diploma to LYMAN J. LLOYD, the manufacturer, Albany.

One of the greatest objects of attraction presented was a fine display of highly polished *Cutlery*, from the shop of EDWARD OWENS, Albany, consisting of surgical instruments, &c. Mr. Owens has been long celebrated for the beauty, perfection and finish of edge instruments, and if he continues to sustain his well-earned reputation, he will be in the envied condition, these hard times, of "*owing* no man anything." They award a medal.

A fine specimen of *Coach Lace* was offered by ALFRED PIERCE, of Albany, equal, in the opinion of the committee, to any imported. The manufacture of this article has been recently introduced into this country, and they award a diploma.

Some *Coffee Urns*, of block tin, were presented by JOHN IGGETT, of Albany. From the finish of the article, and the judicious arrangement of the heaters, they suggested to the committee in the first place the comfortable thought of the hot coffee to be derived from them, and repelled the idea from a man owning one of them, the belief that he ever would be reduced to cold coffee himself. They award a diploma.

Beautiful *Levelling and Surveying instruments*, exhibited by Mr. ANDREW MENEELY, of West Troy. From a *survey* of these articles, the committee believe that they would *level* all objections to the use of them in preference to those of foreign competition. They award a diploma.

Cane Bottomed Chairs, very handsomely carved, of the curled maple, from the manufactory of W. & R. TUCKER, Albany, were exhibited. The committee would recommend them to the notice of the public, and hope this opinion of the *Chair* will be sustained.

Some splendid specimens of *complicated Door-Locks* were exhibited from the shop of JOHN WOOLENSACK, Albany. It is said poetically that love laughs at locksmiths, but the committee are of opinion that these locks would defy all the arts of *Cupid*, as well as those of *cupidity*. They award a medal.

Some well manufactured *Leather Trunks*, perfect in their kind, combining the advantages of writing desks and portfolios, with ease in stowing and packing, deserved a diploma for Mr. F. A. KEELER, Albany, and a recommendation to the traveling public.

Mr. JACOB HOCHSTRASSER, Albany, presented specimens of beautiful *Japanned Patent Leather*—a truly fine mirror for the sable gentry of our country, casting no unjust reflections. A diploma.

Screw Plates, that seemed from their color, to be well tempered, were offered by DANIEL B. KING, Waterford.

Alum dressed Lamb Skins, exceedingly white and soft, were shown by THOMAS GUEST, of Albany. Under shirts of this material in winter would make our *Guest* a *bosom friend*.

JESSE VAIL, Albany, exhibited some *Cast Iron Grates*, and fire screens—splendid specimens of casting. A diploma is awarded for this *grate* improvement in the art.

Sleighs from the manufactory of J. D. WEMPLE and J. GOOLD & Co., Albany, well sustain the character of Albany mechanics for these articles, which are sent to remote parts of our country.

Mr. L. CUNNINGHAM, Albany, presented a very ingenious *Mortising Machine*, which appeared to do its work with despatch, and would seem to dispense with the necessity of a great deal of manual labor usually employed in the business. A diploma.

BENSEN & MCCALL, of Albany, had a fine display of every variety of *Planes*. The purchasers of this article, by industry, *plain* living and *plain* dealing, need never fear of always being above *board*. A diploma.

JOHN GIBSON, Albany, *Plane Maker*, came in for a just share of the praise which the committee have awarded to Bensen & McCall.

Mr. ANDREW MENEELY, of West Troy, exhibited some of his large church bells, of a peculiarly fine tone. A diploma.

A *Domestic Cooking and Washing Steamer* was put in operation on the ground contiguous to the building. The capacity of the fire place seemed to be little more than a gallon and placed in front of the boiler. Boilers were ranged round, of all sizes, and it seemed to the committee to do its work to a charm. It no doubt is a valuable improvement, and for which the committee award a medal to Mr. BATTEL, of Albany.

ROBINSON & VANDERBELT, of Albany, had on the ground a splendid coach, price 800, of exquisite color and finish.

Also exhibited a fine finished trotting wagon, weight, 264 lbs., with a new improvement in the reach, being double, and giving additional strength; it supersedes some of heavy ironing—made by two young mechanics of this city, to whom are awarded a diploma each.

The committee can hardly do justice to the many beautiful articles of *embroidery* produced on the occasion, from various parts of the state, by the handwork of those from whom our sex derive so many of the comforts, luxuries and elegancies of life. They do not want the inclination, but they want the time to describe them as they deserve. Suffice it to say, they award diplomas to Miss MARY E. FOUNTAIN, of Peekskill, for beautiful embroidered table covers. Also, to Miss WATERMAN, of Albany, for various specimens of her exquisite work of lamp mats, and other embroidery. Mrs. M. HAINES, for embroidery, gorgeous wreath; and to Miss MARGARET HUDSON, of New York, for a pair of Lisle net gloves, more beautiful than any member of the committee have known to be imported. To Miss HELEN M. WHIPPLE, of Albany, for her splendid embroidered lamp mats, of flowers, &c. To Miss C. SOUTHWORTH, of Avon, N. Y., for two beautiful hearth rugs, worked with the needle, and which must have been the result of great industry and perseverance. To Mrs. PRENTICE, of Albany, for two quilts of piece work, made of silk. And to the principal of St. Joseph's Orphan Asylum, for numerous pieces of exquisite embroidery. Arachemn, who contended with Minerva for skill in embroidery, would not have met with her fate in being turned into a spider by the goddess, if she had possessed half the skill of our interesting countrywomen. The committee again aver, that time is wanting to do justice to the infinite variety of the beautiful articles.

A very handsome pipe clay vase, for ornamental garden pleasure grounds, exhibited by THORBURN, of this city.

Mr. A. WALSH, a most indefatigable member of this society, from its commencement, exhibited a number of specimens of products from his garden, consisting of Madder, Teazel Wood, and Senna; and in addition presented one of the crowning ornaments of the fair, a beautiful miniature plough, ornamented with the most rare and beautiful flowers of the season, suspended in vials full of odors sweet, as an humble tribute from Flora to Ceres, indicating Horticulture to be the handmaid to Agriculture. The committee, in considering these offerings, and his many services, award a medal.

Mr. ANDREW MENEELY exhibited a new and improved *town clock*, describing the improvement to consist in the dead beat, rendering it less liable to get out of order than those in use. The committee do not possess knowledge enough to pass upon the improvement.

INVENTIONS, DISCOVERIES, ETC.

COLT'S SUBMARINE BATTERY.

The manner in which Colt's submarine battery is exploded is stated by a correspondent of the *Philadelphia Ledger* to be as follows: The battery consists of a light sheet iron box filled with gunpowder, and having two copper wires wound around with cotton, then varnished over with a mixture of gum shellac, alcohol, and Venice turpentine, and extendig through tight corks in one side of the box, having a piece of *platina wire* extending between them in the box amongst the gunpowder, and the two copper wires extending off from this box, which may be anchored in the channel of a river, to a large one of Grant's electricity collecting machines, electrified by a galvanic battery, which may be seven or eight miles distant from the box and where the operator is, having one of the wires in his hand, reday to attend them to the collector the instant the signal is given to explode the box. Now when an enemy's vessel is over this box, and the wires are that instant attached, positive electricity immediately passes along one wire and negative electricity immediately passes along the other wire, and these two kinds of electrcity concentrate on the platina wire, instantly heat it *red hot*, and it fires the gunpowder, the explosion of which blows the vessel to fragments.

NEW CLOCK.

M. Lebonardt, watchmaker, of Berlin, has constructed a clock marking not only the hours and minutes, but even the thousandth parts of a second. An additional circle is added for this purpose outside the others, and a needle marks the thousandth parts exactly. He has applied this invention to the measurement of the speed of cannon-balls, and has invented an ingenious peice of mechanism, by which the ball in leaving the cannon sets the hand in motion, and a galvanic wire affixed to the mark, and communicating with the hand, stops it the moment the ball reaches its destination. Trials were lately made at the royal school of artillery, in presence of all the staff of the establishment, and succeeded admirably. They are shortly to be repeated before the ministry of war.

FOSSIL SKELETON.

A few days since, some miners in sinking a shaft for lead ore, about six miles from Dubuque city, Iowa, found a skeleton of one of those animals whose race has long since become extinct. The bones are in a tolerable state of preservation, and from appearance belonged to a gramnivorous animal, twice the size of an elephant. One of the molar teeth which I saw, weighed four pounds seven ounces, and was entire and the enamel perfect. The skeleton was imbedded in limestone, at a depth of from fifteen to twenty-six feet from the surface.

FOSSIL BONES.

Dr. Lund, says a London paper, has lately explored nearly 200 pits in Rio Janeiro, and has collected in them among the mammalia 115 species, though only 88 species now inhabit those regions. The human bones found are petrified, and intersected with particles of iron, and the discoverer considers them, from the peculiar configuration of the sculls, to have belonged to a very antient Brazil population, existing at least three thousand years ago.

KNIFE CLEANER.

Some ingenious person has invented a rotary knife cleaner, which polishes one thousand knives in an hour, making them as bright as new.

TO TAKE GREASE OUT OF SILK.

If a little powdered magnesia be applied on the wrong side of the silk, as soon as the spot is discovered, it is a never failing remedy, the stain disappearing as if by magic.

At St. Albans, Vt., they are now manufacturing cast iron rifle barrels, equal to wrought. They will stand a nine inch charge of powder without the least appearance of fracture or strain.

A copper mine, several miles in length, has been discovered in Dale co., Missouri.

A CHILD'S IMPRESSION OF A STAR.

She had been told that God made all the stars
That twinkled up in heaven, and now she stood
Watching the coming of the twilight on,
As if it were a new and perfect world,
And this were its first eve. How beautiful
Must be the work of nature to a child
In its first fresh impression! Laura stood
By the low window, with the silken lash
Of her soft eye upraised, and her sweet mouth
Half parted with the new and strange delight
Of beauty that she could not comprehend,
And had not seen before. The purple folds
Of the low sunset clouds, and the blue sky
That looked so still and delicate above;
Filled her young heart with gladness, and the eve
Stole on with its deep shadows, and she still
Stood looking at the west with that half smile,
As if a pleasant thought were at her heart.
Presently, in the edge of the last tint
Of sunset, where the blue was melted in
To the faint golden mellowness, a star
Stood suddenly. A laugh of wild delight
Burst from her lips, and putting up her hands,
Her simple thought broke forth expressively—
"Father! dear father! God has made a star!"—*Willis.*

AMERICAN FEMALE LABOR.

There are in the United States some eight millions of women, a great portion of whom are dependant upon their daily labors for their daily bread. They form a large proportion of the industrious community, and as such they are worthy of all protection. They are the mothers and daughters of the land, exercising the most incalculable influance upon the morals, the fortunes, the destinies, and the happiness of the republic. As such should not every effort be made to sweeten their daily toil, and to afford them compensation for their daily labor? If they are forced by misfortune to a dependence upon their own industry, should we not stretch out for them a helping hand? Forced as they are to an utter reliance upon our generosity, should we not be careful how we tamper with the sacred trust confided to us?

The wages of female laborers, are, generally speaking miserable low. They afford nothing like an adequate compensation for the work preformed, and it is always supposed that a woman must do identical tasks cheaper then man. Why this is so, we cannot conceive; there is no good reason for it—none at all. Women are forced to work constanly for a miserable pittance, hardly sufficient to support life, with no prospects beyond save the dark one of beggary and starvation. The terrible consequences of this state of things are too well known.

A portion of the reform in this matter must commence with the woman herself. If those whom Providence has blessed with affluence, see fit merely to gratify a silly vanity or a depraved taste, to wear only articles of foreign manufacture, they have their part to take in the responsibilities that follow.

Foreigh dress! it makes us sick to think of the sums lavished to pander to this miserable mistake, that an article cannot be valuable, fashionable, wearable or decent, unless it has crossed the Atlantic. Women of America! if you would see your sisters elevated and your sex respected, for the sake of humanity and justice, give up this silly idea that a thing is excellent because it is foreign. It is a duty you owe to yourselves, your country and your sisters. Wear American fabrics, employ American needle women, do not be ashamed to wear an American bonnet, deem it an offence against moral laws to squander money in a Parisian clock or a Parisian cap while thousands of your countrywomen are driven to beggary, for the want of employment.

ETYMOLOGY OF THE NAMES OF COUNTRIES.

The following countries were named by the Phœnicians, the greatest commercial people in the antient world. These names, in the Phœnician language, signify something characteristic of the places which they designate:

Europe signifies a country of white complexion, so named because the inhabitants there were of a lighter complexion than those of either Asia or Africa.

Asia signifies between, or in the middle of, from the fact that geographers placed it between Europe and Africa.

Africa signifies the land of corn ears. It was celebrated for its abundance of corn, and all sorts of grain.

Siberia signifies thirsty or dry; very characteristic of the country.

Spain, a country of rabbits or conies. This country was once so infested with these animals that they sued Augustus for an army to destroy them.

Italy, a country of pitch, from its yielding great quantities of black pitch.

Calabria, also; for the same reason.

Gaul, modern France, signifies yellow haired, as yellow hair characterized its first inhabitants.

The English of Caledonia is a high hill. This was a rugged mountain province in Scotland.

Hibernia is almost, or last habitation; for, beyond this, westward, the Phœnicians never extended their voyages.

Britain, the country of tin; as there was great quantities of lead and tin found on the adjacent islands. The Greeks called it Albion, which signifies in the Phœnician tongue, either white or high mountains, from the whiteness of its shores, or the high rocks on the western coast.

Sardinia signifies the footsteps of man, which it resembles.

Rhodes, serpents or dragons, which it produces in abundance.

Sicily, the country of grapes.

Scylla, the whirlpool of destruction.

Charybdis, the hole of destruction.

Etna signifies furnace, or dark, or smoky.

Syracuse signifies bad savor, called so from the unwholsome marsh upon which it stood.

The above are gathered from a very antient history of Britain.

MECHANISM OF THE HUMAN FOOT.

There is nothing more beautiful than the structure of the human foot, nor perhaps any demonstration which would lead a well educated person to desire more of anatomy than that of the foot. The foot has in its structure, all the fine appliances that you see in a building. In the first place, there is an arch in whatever way you regard the foot; looking down upon it, we perceive several bones coming round form the astragalos, and forming an entire circle of surfaces in the contact. If we look at the profile of the foot, an arch is still manifest, of which the posterior part is formed by the heel, and the anterior by the ball of the great toe; and in front we find in that direction a transverse arch; so that instead of standing, as might be imagined, upon a solid bone, we stand upon an arch, composed in a series of bones, which are united by the most curious provisions for the elasticity of the foot; hence, when we jump from a height directly upon the heel, a severe shock is felt; not so if we alight on the ball or the toe, for there an elasticity is found in the whole foot, and the weight of the body is thrown upon the arch, and the shock avoided.

THE HUMAN STATURE.

The idea that the original progenitors of the human race were exceedingly large and tall in stature, is still held by some European writers. Not many years since, a French author published a work in which he endeavored to prove that there has been a gradual depreciation in the size of man, from the commencement of the world, downwards, and that the same lessening control will continue to exert an influence until the end of time. A corresponding decrease in the age of mankind may be observed, it is alleged by enquiry into the longevity of the human race, in the several centuries of the world. Some contend, also, that the deficiency in the number of years between various personages noticed in the antient sacred writings and those of our day, is more than counter balanced by the great increase of our species throughout the world, and that in the place of accumulated years, we have accumulated numbers whose existence is brief, that the earth may not be filled to overflowing. All these are curious speculations, not without interest to the enquiring mind.

A French author, an academician of some note, calculated that Adam was 123 feet 6 inches in height, Noah a little more than 100 feet, Abraham 80, Moses 30, Hercules 10, Alexander 6, and Cæsar less than 5. Progressing in this ratio, in a few years hence the world would be filled with a race of Lilliputians.

ANECDOTE OF A PILOT FISH.

On our voyage home from Australia, during a calm on the equator we caught two sharks. On the approach of the first, the water being quite clear, the pilot fish was observed swimming either just above the shark's head, or by the side of his dorsal fin. He was no sooner hauled in than a passenger, having baited a hook with a piece of pork fat, caught the pilot fish also. He was a beautiful little plump fish, about seven inches in length, and marked transversely with four or five bright blue bands. Two of the sucking fish (remora) were found adhering to the shark; and so firmly did they maintain their hold, that it was not until after repeated lashings of his tail on the deck that they were dislodged from their position. Having picked them up and placed them in a pail of water, they immediately fastened on its sides in the same manner. Their length was four and five inches. A day or two afterwards, when the second shark was caught, I procured another remora and all three of them were put into a cistern of water, where they seemed very much at their ease for several days, but were at last lost by drawing off the water to wash the decks. But the pilot fish on this occasion was proof against the allurements of pork fat: he patiently swam backward and forward in search of his master. Next day he swam round and round the ship, at times leisurely, but often by sudden starts, betraying impatience and anxiety. This he continued to do for two or three days, until a gentle breeze gave the ship, at last, some motion on her course. Still he followed her: day after day, a dozen times a day at least, whenever any one looked over the stern, there he was, and he alone, close to the rudder, availing himself of the advantage of being in the eddy-water. Occasionally he dropped a little way astern, and then he would make a vigorous effort and regain his former position. This continued for more than a fortnight, during which we had run at least 2000 miles, when, arriving in a higher latitude, stronger breezes so ruffled the surface of the water, that the little pilot fish was seen no more.—*Penny Mag.*

ON WHEELING.

Going to dinner the other day, we saw a little codger about two years old, sitting on a wheelbarrow and trying to wheel himself. It struck us that many people in this world are caught in the same act, and we shall always think hereafter,

When we see a business man trusting everything to his clerks, and continually seeking his own amusement; always absent from his counting-house, and yet expecting to get along—he's *sitting on a wheelbarrow and trying to wheel himself.*

When we see a professional man better acquainted with every thing else than his profession, always starting some new scheme and never attending to his calling, his wardrobe and credit will soon designate him as *sitting in a wheelbarrow and trying to wheel himself.*

When we see a farmer with an over-abundance of hired help, trusting everything to their management, his fences down, implements out of repair, and land suffering for want of proper tillage; too proud or too lazy to work himself, he's *sitting on a wheelbarrow and trying to wheel himself.*

When we see a mechanic run half a square every day to borrow a newspaper, and may be have to wait ten or fifteen minutes before he can get it, we shall suspect that the time he loses would soon pay the subscription, and consider him *sitting on a wheelbarrow and trying to wheel himself.*

When we see a man busily engaged in circulating scandal concerning his neighbor, we infer that he is pretty deep in the mud himself, and is *sitting on a wheelbarrow and trying to wheel himself.*

ALBANY, SATURDAY, OCT. 15, 1842.

BETTER TIMES.

We have had the means of knowing something of the general distress and gloom which has pervaded the ranks of the mechanics and manufacturers, for it is among them that our circulation extends; and in watching their condition and prospects, we have had occasion to observe how great has been the depression under which they have struggled during the past season. It is reasonable to believe that there were at one time over *two hundred thousand* persons out of employment in the manufactories of New York and New England alone, and many of those who were fortunate enough to be retained in business, have found their pay inadequate to their comfortable maintenance.

It is in vain to deny that business has rapidly increased within the past month, whatever may have been the cause of it. A better feeling prevails, and the laboring classes are more generally at work, at reasonable wages, who were as generally unemployed and suffering in want a few weeks since. Nor is this state of things confined to the laborer, for the merchant and capitalist partake equally of the general gladness and confidence. Neither is this feeling limited in its effects, but prevails throughout the country. We have gathered from the public journals a few facts to show the progress of improvement. They afford a better and far more satisfactory evidence to the honest working man than all the speculations of party politicians.

An agent of the Port Henry iron company, whose works are in Essex county, says that orders have been sent up to put the whole establishment in full blast. They had recently 1000 tons of iron in the city of New York, which is finding a ready sale at $27 per ton.

At the Mattawam factory 400 hands, it is stated, have been set to work; and the establishment of Mr. Tech, at Haverstraw, which employs over 200 persons, is about to go into operation.

A gentleman from New Jersey states that more than forty mills which have been closed in that state are to be speedily opened.

The extensive cotton factories at Morristown, Pa., which had been idle for some months, were started again a couple of weeks since; and it is said that 500 persons who were recently unemployed are now busily engaged in the factories in Delaware county.

The *Portland Advertiser* says that orders have just been received by journeymen shoemakers in that vicinity, who were thrown out of employ by the reduction of duties in the late tariff, to return to Massachusetts, where they had formerly been employed, to engage in their former business.

A better state of things, says the *Baltimore American*, has succeeded to the previous depression in almost every department of business. It is now considered that a firm basis is established upon which operations may be conducted with assurance as to results. The general feeling in the community is more cheerful and lively than it has appeared to be any time within the last few years. And a correspondent of the *United States Gazette* writing from the same place says:—Business seems to be on the revive—confidence is again taking the place of suspicion and distress. Our merchants are up and doing. The wharves begin to present a lively appearance.

The *Philadelphia Gazette* says that several factories in that city which have long been closed, will immediately commence operations. Among them the Globe mills, Lenning's chemical works, and Dr. Bergen's glass works. We learn also that the Lehigh company has been applied to for water power to be applied to some new iron works.

A manufacturer in Waterbury, Ct., reports that he has received more orders for goods in his line since the passage of the tariff bill than he had received during the whole of four months previous.

In the iron region of New Jersey, the ore which has been on the banks of the canal as quiet as stones and almost of as little value, has been contracted for.

The Saugerties iron works, which previous to its suspension some months since, gave employment to a large number of hands, and payed out over three thousand dollars monthly, are prepared to resume operations.

Whatever parties may say with respect to the cause of this state of things, it is with facts alone that we have to do, and the fact that a better state of things does exist is of more consequence to the artisan than the speculations of theorists.

QUESTIONING CANDIDATES.

Mechanics of the different counties should attend immediately to the following resolution of the state convention. The committee of four alluded to have interrogated the candidates for governor and lieut. governor.

Resolved, That there be a committee of four appointed by this association, whose duty it shall be to interrogate the candidates who may be nominated for state officers, to be elected at the fall election, as to what their opinions are in relation to, and what course they intend to pursue, if elected, in relation to the reformation of the penitentiary system of this state, and that it is recommended to the mechanics of each county in the state to interrogate their nominees for the legislature in like manner.

FRICTION, ITS ORIGIN AND EFFECTS.

An interesting discussion took place at the late session of the British scientific association, showing that the fractures of broken axles, instead of having the fibrous appearance of wrought iron, presented the crystalline appearance of cast iron; and that this is attributable to a *magnetic* or *electrical action*, induced by friction, which had changed the molecular structure of the iron. This fact is also attested by some of the most eminent French and English engineers. It is a well known fact that swaging or hammering the iron after it has been cooled *below a red heat*, invariably induces a crystalline structure; all detioration produced by careless forging, are absolutely cured by the process of annealing; by this process the injurious effects of injudicious workmanship would be entirely removed, and the fibrous character of the iron restored. The French *savans* consider the magnetic or electrical action to be induced by friction. These facts are important to the mechanic.

SPINNING.

The spinning wheel of our grandmothers is not yet entirely superceded, as we find by the occasional notices that are published of the feats of some good house wife, whose industry defies the competition of machinery on the one hand, and the *refinement* of society on the other—the spinning jenny and the piano. We see it announced that a Mrs. Ingalls of Keene, N. H., lately spun on a common wheel, 120 knots of woolen yarn in 12 hours, and reeled it on a hand reel, and finished off the day's labor with various other house work. Think of that ye misses who toil not nor spin. Ye may shrink from such old fashioned employments, but they will ever draw forth the plaudits of the world, as they have done since the days of Solomon, whose description of a virtuous woman was a theme of admiration to us as long ago as when, in boyish mischief, we used to arrest our mother's wheel, and cloud her brow with a frown, by inserting our fingers in the *flyers*. We cannot refrain from repeating it for the benefit of our fair readers many of whom may have overlooked it. It is the best inventory of the properties of a good wife that ever was written, and establishes the propriety of the custom of spinning against all opposition! It was "fitly spoken" by Dr. Nott before the Young Men's Association, some time since. The young ladies who were present appeared to be greatly puzzled what to make of it. "Who can find a virtuous woman?" the wise man inquires; "for her price is far above rubies. The heart of her husband doth safely trust in her, so that he shall have no need of spoil. She will do him good and not evil, all the days of her life. *She seeketh wool and flax*, and worketh willingly with her hands. She is like the merchant's ships, she bringeth her food from afar. She riseth also while it is yet night, and giveth meat to her household, and a portion to her maidens. She considereth a field and buyeth it; with the fruit of her hand she planteth a vineyard. She girdeth her loins with strength, and strengtheneth her arms. She perceiveth that her merchandize is good: her candle goeth not out by night. *She layeth her hands to the spindle, and her hands hold of the distaff*. She stretcheth out her hand to the poor; yea, she reacheth forth her hands to the needy. She is not afraid of the snow for her household; for all her household are clothed with scarlet. She maketh herself coverings of tapestry; her clothing is silk and purple. Her husband is known in the gates, when he siteth with the elders of the land. *She maketh fine linen*, and selleth it; and delivereth girdles unto the merchant. Strength and honor are her clothing; and she shall rejoice in time to come. She openeth her mouth with wisdom; and in her tongue is the law of kindness. She looketh well to the ways of her household, and eateth not the bread of idleness. Her children rise up and call her blessed; her husband also, and he praiseth her. Many daughters have done virtuously, but thou excellest them all. Favor is deceitful, and beauty is vain; but a woman that feareth the Lord, she shall be praised. Give her of the fruit of her own hands, and let her own works praise her in the gates." Solomon was a connoisseur of the sex, and if in

his whole establishment, which is well known to have been all-sufficiently extensive, he found one who could accomplish one hundred and twenty knots in twelve hours, there is no doubt she sat for the above portrait.

MASSACHUSETTS CHARITABLE MECHANIC ASSOCIATION.

The triennial festival of this association took place at Boston on the 6th inst. In allusion to this occurrence, the Boston Transcript makes the following remarks in respect to the objects and character of the association, which will be found interesting to the mechanic. In the 2d and 5th Nos. of this paper will be found some account of the association.

The mechanic interest of Boston is so fully and nobly represented by the Massachusetts charitable mechanic association, that, though constituting, numerically, not a third part of the mechanic strength of the community, the reputation, as it were, of the whole fraternity is involved in its deeds and its actions. Here, then, is a powerful stimulus for continued and unabated exertion—not *physical* exertion alone, which so many consider the "one thing needful" for the mechanic, but for the strength—the irresistible force, power and influence—of expansive intellect and moral agency, that mighty enginery which erects and upholds the schools of temperance and reform; the academies of science; and the institutions of eleemosynary benevolence. All this has been effected by the mechanic association of Boston—a society having Christian charity for its corner stone, and the dissemination of truth for its key stone.

With the mechanic association, as is well known, is connected, in the winter, a series of lectures for the diffusion of practical knowledge, another important means to a great end, proving incontestibly that it is not impossible for the "bone and sinew" of our population to labor with rough hands and the "sweat of the brow" from sunrise to sunset, and yet listen to a lecture on the mechanic philosophy in the evening with all the interest of a Davy or a Fulton. The mechanics of past ages have been indisputably the great world's benefactors, and modern history has rendered them illustrious. Such men as Newcome, Smeaton, Arkwright, Crompton and Whitney have not lived in vain; and in fulfilling their destiny here, they faithfully performed the promise to "do good in their generation." But all knowledge is unprofitable, if it be not accompanied by a positive predilection for moral over intellectual education. This is the basis of the Massachusetts mechanic association—the union of charity, morality and intelligence. It never loses sight of the paramount importance of moral excellence, and it labors continually to give its high principles stability and fixedness.

IMMIGRATION.

The influx of foreigners into this country is almost incredible, and were they all of the proper character it would certainly be a matter of rejoicing on our part. But on this point our readers are undoubtedly satisfied. It is unnecessary and unwise to disguise or attempt to conceal the fact, that the great majority are more likely of proving a curse than a blessing; and while some settle down among us, useful and intelligent citizens, the remainder swell the ranks of the vagrants, and populate our prisons and penitentiaries. This is a lamentable fact, and it is useless to shut our eyes and *hope* things are not as bad as many represent.

Sixty-six thousand and eighty-six persons have immigrated to the port of New York alone, since the commencement of this year to the 30th ult. Of these there were:

Merchants,	1,478	Gentlemen,	482	Sailors,	156
Mechanics,	8,646	Parsons,	38	Artists,	66
Farmers,	7,141	Lawyers,	27	Musicians,	29
Laborers,	10,994	Doctors,	125	Teachers,	58

There were 10,603 that had no occupation whatever; and of the 28,170 females, 12 of them were artists, 3 were teachers, 5 were musicians, 168 were seamstresses, and 25,991 had no occupation.

Great Britain sent 30,898 of the whole number. God help them! for it is these who are the most wretched, the most miserable, and for whom there is least hope. The hardy German and Swiss immigrants—who finds *them* dragged by scores to our police office? who finds them at every corner clamoring for alms, for bread, bread? It is from Britain, proud and haughty Britain, that these miserable wretches throng, and fearful will be the fate of too many of these, dispirited and degraded as they are, who think to find in America a sort of El Dorado, where they need but wish to have their wants supplied—where they shall be emancipated from the curse, "by the sweat of thy brow shalt thou eat bread."

DEATH OF DR. CHANNING.

This distinguished divine, whose life has been devoted to the advancement and amelioration of his fellows, is now no more. He expired in Bennington, Vt., on the 2d inst., aged 65 years. He was an eloquent divine, a fearless thinker, and a disinterested philanthropist. A devoted friend of the laborer, and those whom the world contemns, he hesitated not to call them *brothers;* not with a hollow profession and stifled sneer, but with the full feeling of a generous heart. In their defence he devoted his best talents—talents, such as fall to the lot of but few men, and which will endear his name to mankind forever. We should be wanting in respect to the noblest champion of the glorious cause in which we are engaged, were we to be silent on this occasion; and the intelligent mechanic and laborer will regret with us that he could not have been spared yet a little longer to the world. Such men, so talented, so devoted, are seldom met with here, where selfishness and passion too often turn the brightest and richest gifts of Heaven into curses, and render those faculties which were designed for the noblest purposes, subservient to the wickedest ends. But the name of CHANNING is deeply engraven on the great heart of his countrymen, and in his death the civilized world will deplore the loss of one who ennobled the name of MAN, and who was one of the brightest ornaments of his age and nation.

FAIR OF THE AMERICAN INSTITUTE.

We have had an opportunity of witnessing this grand exhibition of the arts; and although it does not appear that so great a variety of articles are exhibited, yet they are evidently of a superior character, generally. It would be impossible for us to notice the numerous objects worthy of remark; in our next number, however, we may be more particular. Suffice it to say, that it is a great gala day for mechanics and the friends of American industry.

One article to which our attention was particularly directed—and not unnaturally, from the fact, as our readers will recollect, that we have said much on the subject—was a model of the Annesley system of naval architecture. From the limited opportunity we had to examine the model, on this occasion, it was apparent that all which has been said of the system is fully justified. But we shall give a further notice of this on another occasion. In the mean time we advise our friends and readers to visit the fair, if possible, where they will be amply compensated for the time required.

AMERICAN HOOPS.—There were some splendid specimens of workmanship in this line, and not only were they splendid in workmanship but of a very improved character. We understood that they had attracted the special attention of the judges in this branch of manufactures.

The stone musical instrument, exhibiting a specimen of the musical qualities of rocks under certain circumstances, was truly astonishing, but can only be appreciated by an examination. An account of it may be found in a previous number.

AGRICULTURE AND HORTICULTURE.—The display in this line at the American Institute this year is of a very superior character, and has deservedly attracted special attention. The agricultural products and implements are also numerous and of an excellent quality. The friends in these departments of productive interests will find a grand display, and it cannot fail to gratify the hearts of the farmer and mechanic to see thus combined in this great exhibition objects which mutually interest the two most important classes of the community.

PAPER FROM VEGETABLES.—If, as we have somewhere seen, the refuse end of asparagus makes excellent paper, will not many other still more common vegetables make equally good and perhaps better paper? The experiment is certainly worth trying, when the article is in so great demand. The asparagus in a pulpy state, mixed with beet root, makes paper at half the expense of rags.

WATER.—Laplace reckons the mean depth of the sea at five miles. If the existing waters were to be increased one-fourth by any convulsion in nature; or if, as we see in our lakes, the sub-marine surface were to be equally raised, it would drown the whole earth, and all would be swallowed in a general deluge. Even one-eighth increase in the volume of the ocean would submerge a very large portion of both the old and new continents, and the seasons would be changed all over the earth. Constant rains from the increased evaporation would also destroy fruits and the harvest, and change the present order of nature.

STOMACH SWEEPER.—Long before the invention of the stomach pump, there was an instrument used by physicians called the stomach brush. It appears to have resembled an article used by wine coopers called a bottle rinser. When let down into the stomach, it was agitated by a circular wire, and was thought to be in conjunction with copious draughts of warm water, to cleanse the stomach thoroughly.

ABSORPTION BY A LIVING TREE.—Prof. Brande recently mentioned before a scientific association, the following curious fact. A beech tree which had grown upon a mass of iron scoriæ, from an ancient furnace, upon being cut down was found to have absorbed the salt of iron in such a manner as to turn the heart perfectly black. This interesting fact may lead to means of promoting the absorption of preserving fluids by living trees, so valuable in timber for building purposes.

MOORISH CEMENT.—The late conquest of Algiers by the French has made known a new cement used in the public works of that city. It is composed of two parts of ashes, three of clay, and one of sand; this composition, called by the Moors, fabbi, being mixed with oil resists the inclemencies of the weather better than itself.

Mr. Dorr, of Roxbury, says the N. E. Farmer, called upon us a few days ago and stated that he used a cement made according to the above direction, around the window casings of a stone house he was building about the time this article appeared, and it has proved as good as the statement represents. It is as hard as marble, and will stick to wood as well as stone.

INTERESTING TO WEAVERS.—Otis Allen, whose villanies have been thought to deserve fifteen years probation at Sing Sing, commenced his apprenticeship at the weaving business on Monday last. His carpets ought to bear his mark, that some of his admirers and the friends of the prison labor system may be enabled to choose them out in furnishing their houses. Perhaps he has sufficient ingenuity to form his initials into a new *drop figure* that might become the ton, if the idea was suggested to him. Will not some of his brethren in Wall street attend to it?

BLUEING IRON.

In looking over your paper of the first inst., I saw on page 153 an inquiry by an English mechanic, how to blue small portions of iron and steel, and how to preserve them from rusting without oil. Having myself superintended as operative the fish hook and needle business of R. Hemming & Son, at Forge Mills, Redditch, England, in all its branches, I can answer that inquiry. The fish hooks in that establishment are blued by an improved method, fifteen thousand at a time, with the British potible blue, warranted to preserve from rust seven years. The process is effected in one minute, by immersing them in the blue, which is contained in an iron pot placed over a fire.

JOB JOHNSON,
Fish hook and needle manufacturer.
Malonesville, Brooklyn, 1842.

SYNOPSIS OF NEWS, ETC.

We give below the principal articles brought over the western rail road from Albany to Boston for the week ending on Saturday last.

6572 barrels of flouer.
295 bales wool.
267 tubs and kegs butter.
56 boxes and rolls leather.
45 barrels beer.

Five steamboats only have been knocked into the middle of the millenium, by one snag, on the Mississippi, *within ten days*—just half a steamboat a day. A *scrouging* business.

Noah Webster says, that by substituting *to* for *unto*, in his version of the Bible, he has saved thirty-four pages of close letter-press.

The Turks in attempting to launch a line-of-battle ship at Heraclia, in the Black Sea, capsized her on the stocks. So much, says the correspondent of the London Times, for their attempting to get on without American shipwrights.

The territory of Iowa seems to be advancing rapidly. The Patriot boasts of the skill, and punctuality of the mechanics of Burlington and offers to turn them out against those of the cities.

People cannot be tempted to invest in American securities even at one quarter of their original value. So much for repudiation and dishonesty, says the *London Globe*.

There were on Tuesday at the wharves in Albany one hundred and seven sail of sloops and schooners, besides the usual number of steam, tow and canal boats. Much activity prevailed along the wharves, and there is a gratifying indication of the revival of business.

They manufacture iron coffins at Pittsburg, said to be handsomer, better, and cheaper than wooden ones.

The tariff question having been disposed of, the two great political parties are preparing to discuss it. This is like hanging a man first and trying him afterwards.

There was an exhibition week before last at New Brunswick, of five cattle, raised in that state, weighing as follows, viz: 3993, 3960, 3951, 3877, all steers, and a heifer weighing 3317 pounds.

A letter from Crooked Island, W. I., dated August 25th, says: "Our Salt Pond is full of beautiful salt, from one end to the other. The great cry is the want of laborers; if we had them, about 150,000 bushels may be taken out in a short time."

An exchange paper says—"a number of deaths are unavoidably postponed."

We see it stated that the "Great Western" Rolling Mill & Co., of Armstrong county, have got the furnishing of the rail road iron for the Madison and Indianapolis rail road—no small matter. We want to see the result of the experiment in American rail road iron. We firmly believe that as good material for this purpose can be manufactured here, as in Britain. The trial on this rail road will be the proof. *Pittsburg Sun*.

The annual statement of the Shipping List makes the cotton crop for the last year 1,465,249.

Exported to England,	935,631	bales.
" France,	398,129	"
" other places,	51,533	"
Home consumption,	267,850	"

	1842.	1841.
Crop from New Orleans,	727,658	813,595
" Alabama,	318,315	420,701
" Florida,	114,416	93,552
" Georgia,	232,271	148,947
" South Carolina,	260,164	227,400
" North Carolina,	9,737	7,865
" Virginia,	19,013	20,800

The crop of 1840-'41 was 1,634,945 bales.

The Savannah Georgian has a statement which makes the crop 1,632,335 bales.

Mr. D. N. Russell of this town, showed us a cucumber last week, raised by himself the past season, in his garden, which measures one foot in circumference, and three feet in length.—*Pittsburg Sun*.

The politicians are getting by the ears—a sure sign that election time is close at hand. "Sir, your party form the greatest set of public robbers that ever existed." "Sir, the side that you belong to would descend even to rob a hen roost" "You lie!" "So do you!" Huzza! who wouldn't be a politician?

A Mr. Higgins, of Norfolk, Va., has bored for water to the depth of 108 feet The water which has sprung up from that depth has all the required properties of "pure, wholesome water," but he cannot be satisfied until he has penetrated a little deeper.

A stone bridge over Millers river, at Montague, Mass., 79 feet span, 31 feet rise, which was to have been completed the next day, gave way on Friday last, from the "too great pressure at the sides before a sufficient weight was placed on the top of the arch, and most of this great structure now lies deep in the bottom of the river."

Elworth, the pedestrian, accomplished his great feat of walking 1000 miles in 1000 consecutive hours, on Wednesday morning, 5th inst. The last mile but one he performed in 7 minutes 30 seconds.

The girls who a few weeks ago, fled from Lowell, Nassau, Manchesser, Exeter, Dover, Great Falls, and other manufacturing villages in New England, to their many scattered homes, are beginning to find their way back at the call of the manufacturers, to the villages they had deserted.—*Newburyport Herald*.

The legislative assembly of Transylvania has adopted the following resolution:—First, every citizen has a right to take part in public affairs; second, everybody is entitled to purchase and possess real estate; every third person may freely dispose of his labor, and of the fruits of his industry; fourth, the penalty of the bastinado shall not in future be applied to the owners of landed property.

Within the last two years there have been 154 bank failures including branches, and involving capital of more than one hundred million of dollars.

In consequence of the American tariff, English merchants are speculating on the prospect of increased exports to Canada for smuggling, a very neat branch of trade.

Tomato dumplings are much praised in some of the newspapers.

A pear was, last week sold for 30 sous in the market of St. Sever (Pyrenees), which weighed 4 pounds. Its length, without the stem, was 8 inches, and its circumference about 18 inches.

At the Polytechnic Institution, London, may be witnessed the curious operation of cooking by reflection, by which means a mutton chop is cooked at a distance of 100 feet from the fire.

A shoemaker in Boston has introduced the fashion of ladies' shoes, made reasonably wide and comfortable. It is stated that they will wear twice as long as narrow shoes.

Captain Cialdi has received orders to proceed to Egypt to take charge of the obelisk which Mehemet Ali has presented to the pope. Europeans call it the Obelisk of Sesostris; the Egyptians that of the patriarch Abraham. This will be the twelfth obelisk now in the possession of Rome from Egypt.

Two young men in Albany by the names of Witsel and Chadderdon, laid sixteen hundred feet of flooring in seven hours and a half. The Albany Argus thinks it would be hard to beat this.

According to the last census, the population of Moscow amounted to 350,000 souls. 40,000 workmen were employed in the large manufactories, and 30,000 others in inferior branches of industry. The value of the articles yearly manufactured in that city was estimated at 20,000,000 silver rubles.

A conkshell was recently found when boring for pure water in Market Square, Norfolk, Va., at the depth of seventy two feet below the surface of the earth. It was of a large size, and the enamel on the inside perfect, different somewhat from those of the present day, in being curiously surmounted with ridges or waves curving round the shell.

Captain Clement Norton, of Edgartown, Martha's Vineyard, has assisted in taking thirty-eight thousand and forty barrels of oil; has made fourteen South Sea voyages in twenty-six years, twelve of them in the capacity of master; has sailed over a million of miles, and never cost the insurance offices a farthing or lost a spar larger than a topsail yard. Capt. Norton caught the first whale the oil of which was taken to Edgartown.

Prussia is projecting a system of railroads on a grand scale.

The heats of the summer have so dried up the waters of the river Elbe, that the water mills are all at a stand; and near Pirna the river is entirely dry. The waters in retiring, have given up a secret kept by them for more than 200 years. A square stone is left bare, having the following significant inscription in Saxon *patois*:—"When last men saw me, in August, 1629, they wept; and they who see me next shall weep too."

A person behind the age is generally respected—a person before the age is treated with neglect.

AGENTS WANTED.

Mechanics out of employment may find it a paying business to solicit subscribers for this paper in their vicinities and among their friends. Applications, post paid, directed to this office will meet with attention; they should be accompanied by certificates of character and responsibility.

NOTICE.

The members of the Albany County Mechanics' Association will meet at Leggett's 4th Ward House, Beaver street, on Tuesday evening the 18th inst., at 8 o'clock, for the purpose of completing the organization and electing officers of the Association.

W. R. BUSH,
Chairman Last Meeting.

WEAVER & RICHARDSON, Umbrellas and Parasols made, covered and repaired, in the neatest and most durable style, at No. 66 Green street, Albany, opposite the first Baptist church. N. B. Umbrellas can be furnished by the dozen at short notice. 47

PRINTING.—Every kind of letter press printing will be done to order on short notice at the office of the Mechanic, in the best manner and at reasonable prices. Business, visiting and wedding cards executed in a superior style on an hour's notice. New and fashionable type for books and pamphlets; hand bills of every size and style; circulars, bill heads, &c. &c.

MISCELLANY.

MY OLD COAT.

Ah, many days have lonely flown
Since thou wert with the rubbish thrown,
And wild's the sorrow I have known,
Since last we met—
Dame fortune sour and sullen grown,
And I in debt.

Old coat—when first thou gracedst my back,
My boat had got the golden track,
And fortune drove me with a smack
Full swiftly on;
But now the jade, alack! alack!
Has swiftly flown.

When first I wore thee, hope was strong,
And bore me carelessly along:
'T was then I reckless wed to song,
But now I reck
That e'er her fated bowers among,
I thrust my neck.

Farewell, old coat—thy fate is mine,
I've lost my wealth, thou thy shine;
I've served my turn, as thou hast thine;
Be this thy knell;
I mind thee now for auld lang syne—
Old coat, farewell!

FELLOW FEELING.

It is told of a certain worthy and wealthy citizen, who has acquired the reputation of being a considerable consumer of the good things of the table, and has been "widened at the expense of the corporation," that on coming out of a tavern, after a turtle feast, a poor boy begged charity of him—"For mercy's sake, sir, I am so very hungry!" "Hungry!—hungry!—hey!—what!—complain of being hungry!—why I never heard the like!—complain of being hungry!!—Prodigious!!!—why I'd give a guinea to be hungry!!—why a hungry man (with a good dinner before him) is the happiest man in the world!—There, (giving the boy half-a-crown,) there, I don't want you to take my word for it; run along, my fine fellow, and make the experiment yourself."

DONATELLO.

The enthusiasm of ardent and of forcible minds appears like madness to those who are dull and phlegmatic. The pleasure it inspires is the greatest and most independent remuneration that men of genius receive for their efforts and exertions.

Donatello, the great Florentine sculptor, had been long working at his statue of Judith; and on giving the last stroke of the chisel to it, he was heard to exclaim, "Parla! speak now, I am sure you can!"

THE TWO FRIARS.

Bougainville the navigator while trading to Otaheite, was accustomed to leave there two of some kind of domestic animals. In his last voyage he had on board a Capuchin and a Franciscan, who differ from each other in the single circumstance of one having the beard shaved and the other wearing it long on the chin. The natives who had successively admired the various animals as they were disembarked, whether they were bulls and cows, hogs and goats, shouted with joy at the appearance of the Capuchin. "What a noble animal! What a pity there is not a pair!" Scarcely was the last wish expressed, when the shaven Franciscan made his appearance. "Huzza, huzza," exclaimed the savages, "we've got the male and the female!"

THE JEW'S BACON.

A Jew pedlar travelling through Flintshire, being exhausted with fatigue, called for refreshment at a little Welsh alehouse, where they could furnish him with nothing but eggs and bacon, which were accordingly prepared and brought to table. The first morsel he put in his mouth there happened to be a clap of thunder that made the house shake again. "Father Moses!" exclaimed the Jew, "what a fuss here is about a bit of bacon—take it away.

PERVERSENESS OF FOREIGNERS.

"What a rum language they talk in this place!" said an English sailor the other day to his companion, who arrived a few days later than the speaker himself had done at Roachefort—"Why, they call a cabbage a *shoe*—(choux!)" "They *are* a d—d set!" was the reply, "why can't they call it a cabbage!"

THE WEAVER'S SINS.

An unemployed weaver meeting with an acquaintance one day, was making his complaint about the present unequalled depressure in business and state of general distress. His friend, with great elongation of visage exclaimed,

"Ah, Jamie, the han' o' providence is in't; it's a just punishment for our sins."

"It may be sae, an' it may not be sae," replied Jamie, "I canna say; but there's ae thing I'm sue o', gin that you say be true—the weavers suffer mair for their sins than ony set o' men that I ken o'."

INDIAN TITBIT.

Southey, in his history of Brazil, has the following anecdote. A Jesuit one day found a Brazilian woman in extreme old age, and almost at the point of death. Having catechised her, instructed her, as he conceived, in the nature of Christianity, and completely taken care of her soul, he began to inquire if there was any kind of food she could take.

"Grandma," said he, "if I were to get you a little sugar, or a mouthful of some of our nice things which we fetch from beyond the sea, do you think you could eat it?"

"Ah, my grandson," said the old convert, "my stomach goes against every thing. There is but one thing I fancy I could touch. If I had the little hand of a little Tapuya boy, I think I could pick the little bones; but woe is me, there is nobody to go out and shoot one for me."

ANIMALS IN INDIA.

The bull is an object of worship, and in most Hindoo towns of eminence you will meet with tame bulls overburthened with fat, lolling at their length in the streets and highways, obstructing passengers and carriages. They are fed by the people, or rather they feed themselves, for they make no scruple of shoving their heads into whole baskets full of grain or vegetables, exposed for sale in the windows, or open in stalls, and though driven away by the waving of handkerchiefs in their faces, or by other gentle methods, yet no Hindoo of any character would think of striking one of these animals with such severity as to endanger its life, or would run the risk of maiming the sacred brute And ridiculous as it may sound, you may see a Hindoo driving away one of these animals from his grain basket by hearty slaps on the face and back, addressing him at the same time by the respectful title of *your holiness*, or *your worship*.

PATENT DEFINITIONS.

Scissors—An article used by many editors instead of brains.

Pump—A lecturer on temperance, with truth at the bottom.

Ink—An article used by pugnacious politicians as a substitute for blood.

Em-brace—An article used by printers—a type of affection.

Soap—A classical falsehood (*lie* in *Greece.*)

Ape—A higher species of the fop tribe.

EPIGRAM.

A member of the modern great
Passed Sawney with his budget,
The peer was in his car of state,
The tinker forced to trudge it.
But Sawney shall receive the praise
His lordship would parade for;
One's debtor for his dapple greys,
And t'other's shoes are paid for.

SCRAPS.

Why is a room full of married folks like an empty room? Because there is not a *single* person in it.

Let the animal magnetizers go about at night and put rioters and disorderly individuals to sleep. Them's the subjects to operate on, instead of those nice, quiet girls.

SHERIFF'S OFFICE, City and County of Albany, Sept. 8th, 1842—ELECTION NOTICE—A general election is to be held in the county of Albany on the Tuesday succeeding the first Monday of November next, at which will be chosen the officers mentioned in the notices from the Secretary of State, of which the following are copies. AMOS ADAMS, Sheriff.

STATE OF NEW YORK, Secretary's office. } Albany, August 31, 1842.

To the Sheriff of the County of Albany:

Sir—Notice is hereby given that at the next general election to be held on the Tuesday succeeding the first Monday of November next, the following officers are to be elected, to wit:

A Governor and Lieutenant Governor of this State.

A Senator for the Third Senatorial District, to supply the vacancy which will accrue by the expiration of the term of Alonzo C. Paige, on the last day of December next.

Also, the following county officers, to wit: Three Members of Assembly.

Yours, respectfully,
S. YOUNG, Sec'ry of State.

STATE OF NEW YORK, Secretary's Office. } Albany, Sept. 7, 1842.

To the Sheriff of the County of Albany:

Sir—Notice is hereby given that at the next general election to be held on the Tuesday succeeding the first Monday of November next, a Representative in the 29th Congress of the United States is to be elected for the Thirteenth Congressional District, consisting of the city and county of Albany.

Yours, respectfully,
S. YOUNG, Sec'ry of State.

BOOK BINDING.—HARVEY H. CORNING, sign of the golden ledger, 82 State street, Albany, carries on the above business in all its various branches, viz: PLAIN, EXTRA and SUPER EXTRA—has a first rate RULING MACHINE and other necessary implements for manufacturing BLANK BOOKS of every description, on the most reasonable terms, of the best materials and workmanship.

N. B. An assortment kept on hand. 27.

LEATHER, OIL, AND FINDING STORE,
No. 18 *Hudson Street.*
J. HOCHSTRASSER,

Will continue the above business at his old stand, and having made arrangements with manufacturers of Leather and Morocco in the cities of NEW-YORK, PHILADELPHIA, and ALBANY, and having in his employ first rate workmen, he is enabled to supply his customers with all the articles in his line on the most reasonable terms, at *Wholesale* or *Retail*, the following are included in his assortment: Oak and Hemlock Harness, Bridle, Collar, Horse, Trunk, Valise and Skirting Leather; Hog Skins, Philadelphia Russet Bridle, do. Facing Skins, do. Lining Hides, do. Top Hides, Patent Leather, Coach Roans, Neats Foot and Liver Oil, Currier's Tools, Oak Sole Leather, Hemlock do., Wax and Grain Upper Leather, do. Calf Skins, Keen's Philadelphia do., Seal and Kip Skins, Splits and Wealt Leather, Cordovan, Red, Green, White and Yellow Linings, Goat and Sheep Binding Skins, White Alum Dressed Linings, Dressed and Undressed Morocco, Colored Goat and Sheep Skins, English Shoe Thread of all numbers, India Rubber and Patent Cloth, Apron Skins, Stock Binding, &c.

N. B. An assortment of SHOE MAKER'S FINDINGS will be kept on hand.

Also, *Roller Skins, Engine Hose, Band, Picker, String,* an *Patent Leather,* on hand and made to order. *Albany,* 1841.

To Builders and Contractors.

THE subscriber having purchased Caldwell and Cameron's Lock Establishment, is now prepared to execute orders on their improved plan, in all the variety of Door Locks now used in the best style of building. The utility of these locks will at once be apparent to any one who may examine them. The principal difficulties existing in almost every lock now in use, and so much complained of by builders and house owners, in almost entirely removed. The simple but substantial application of the spring greatly lessens friction, and consequently lessens and tendency to wear. There is no liability in any of its movements, to get out of order, and any number of them may be applied with perfect ease and security to doors of various thickness, without the usual alterations, trouble and expense, that generally attend the putting on of locks, as is best known to the experienced builder. Their utility has been thoroughly tested by experienced men, for the last two years, with entire satisfaction, and are considered by all who have used them, equal and in many respects superior to any other kind of lock now in the American market.

All orders addressed to the subscriber, at the Furnace, Fonda-street, will receive prompt attention,
ROB'T L CUNNINGHAM.

Schenectady, Nov. 26, 1841.

Reference may be had to any of the undersigned gentlemen who have given their approving card for publication.

We, the undersigned builders, have used Caldwell and Cameron's patent door locks, and from their simple construction, cheapness and general utility, do not hesitate to recommend them to the public, as equal to any lock of American manufacture now in use.

BOARDMAN & VAN VOAST,
GEORGE McBAIN,
HENRY MORSE, *Builders in Albany*
JOSEPH HORSFALL,
JOHN KELLY,
CORNELIUS THOMPSON,
ELIAS LYON, *Builders in Schenectady.*

I have during the past year, put on a number of Caldwell and Cameron's patent mortice and knob locks, and consider them the easiest to put on, and the best working lock I have ever used or seen. 37 JOHN RAYSIDE, Albany.

NEW YORK STATE MECHANIC,
A weekly paper, devoted to the interests of Mechanics and Manufacturers,
IS PUBLISHED EVERY SATURDAY,
By JOEL MUNSELL,
No. 58 *State Steet, Albany,*
At $1.50 per annum in advance.